The Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs

Department of Energy Resources

Imports Feasibility Study:
Capacity Commitment and Netting Requirement

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Issues

Section 105 of the Green Communities Act (GCA) directs the Department of Energy Resources (DOER) to assess the feasibility of implementing two distinct subsections:

1. To require generators to commit their capacity to the Independent System Operator-New England (ISO-NE) control area for the applicable annual period; and
2. To prevent "greenwashing" or "roundtripping" whereby renewable energy and Renewable Energy Certificates (RECs) are sold into Massachusetts, but a similar amount of energy is exported to another control area, effectively resulting in no net gain of green power. The subsection would require that DOER "net" any RECs issued for that renewable power by any exports of energy by the entity seeking Renewable Energy Portfolio Standard (RPS) credit, an affiliate, or a contracted party.

Determination of Feasibility Summary

In reviewing the specific language presented in subsections (c) and (e) of Section 105 of the GCA, DOER has determined that these subsections are not feasible to implement as drafted. DOER has proposed recommendations in this report that it has determined capture the policy intent inherent in those subsections to the maximum extent feasible through alternative mechanisms.

Summary of Process

In the time frame mandated by the GCA, DOER conducted a thorough fact-finding mission on two fronts: (1) seeking input through a public stakeholder process, and (2), hiring a consultant[1] to provide technical expertise and analysis. LaCapra Associates (LaCapra) has provided to DOER a detailed analysis of the questions raised by the GCA, and the potential options for interpreting and implementing those provisions, taking into account applicable market rules and conditions. LaCapra participated in the public forum, conducted a number of meetings with relevant stakeholders on its own and

[1] After a RFP process, DOER selected LaCapra Associates (LaCapra) as the technical consultant.

utilized its understanding and knowledge of energy and capacity markets to help shape various options for DOER consideration, and the relevant feasibility of each.

The stakeholder process consisted of three stages: (1) meetings with a wide range of individual stakeholders from developers to environmental groups, (2) a public forum, and (3) the receipt of written comments. The public forum featured a panel discussion with five stakeholders representing both internal and external resources, encompassing the full spectrum of viewpoints on the topics raised by the GCA, and who have demonstrated a detailed understanding of the questions presented by Section 105. The panelists engaged in a vigorous question and answer session with the DOER panel and representatives from LaCapra. In addition, many other stakeholders presented their positions and responded to specific questions. DOER then collected written comments, posted them, and allowed stakeholders to reply to any of the comments. All comments were collected through, and are posted on DOER's web site.

Through this process DOER met with many organizations and received written comments from a broad spectrum of groups on this issue. Given the complexity of the questions posed and the high level of interest shown by many stakeholders, DOER had as open and deliberative discussion around the feasibility determination as possible.

Legal Implications

DOER's legal team has reviewed the potential legal concerns raised by many of the stakeholders, many of which revolved around the Dormant Commerce Clause. The general premise of these concerns is that to impose requirements that treat generators in the ISO-NE differently than those external to the region would violate the Commerce Clause. In reviewing the case law in this area, DOER did not find that implementing these sections as drafted would result in a clear violation of the Commerce Clause.

The United States Supreme Court has ruled that restrictions on commerce that discriminate based on location face strict scrutiny. For a regulation to survive there must

be no other means to advance a legitimate local interest.[2] This stringent test has been met before.[3] Regulations that do not facially discriminate but have discriminatory effects will be upheld unless the burden they impose on interstate commerce is clearly excessive in relation to the legitimate local benefits.[4]

Although the capacity and netting subsections have a clear locational basis, imposing different requirements of in-region and out of region suppliers, that difference does not clearly rise to the level discrimination that triggers strict scrutiny review. The U.S. Supreme Court has offered no bright line rule as to which types of regulations are discriminatory and which are not.[5] Academic treatments of the issue have reached starkly contrasting opinions on which standard of review applies to state renewable portfolio standards and whether they can survive Commerce Clause review at all.[6]

It is difficult to predict which standard of review might apply to the capacity and netting subsections if challenged, or if they would be challenged at all. In fact, other states have RPS programs that favor in-state interests much more directly, and such programs have yet to be challenged. The possibility that the capacity and netting provisions might be successfully challenged is insufficient reason to conclude that their implementation is infeasible from a legal perspective. In Massachusetts, statutes enjoy a presumption of constitutionality.[7] This presumption cannot be overcome by alleging general conclusions of law or fact.[8]

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[2] *See C & A Carbone v. Town of Clarkstown*, 511 U.S. 383, 392 (U.S. 1994).
[3] *See Maine v. Taylor*, 477 U.S. 131 (U.S. 1986).
[4] *See Pike v. Bruce Church*, 397 U.S. 137, 142 (U.S. 1970).
[5] *See* Steven Ferrey, *Sustainable Energy, Environmental Policy, and States' Rights: Discerning the Energy Future through the Eye of the Dormant Commerce Clause,* 12 N.Y.U. Envtl. L.J. 507, 581 (2004).
[6] *See* Nathan E. Endrud, Note, *State Renewable Portfolio Standards: Their Continued Validity and Relevance in Light of the Dormant Commerce Clause, the Supremacy Clause, and Possible Federal Legislation*, 45 Harv. J. On Legis. 1, (Winter 2008); Patrick R. Jacobi, Note, *Renewable Portfolio Standard Generator Applicability Requirements: How States Can Stop Worrying and Learn to Love the Dormant Commerce Clause*, 30 Vt. L. Rev. 1079 (Summer 2006); Nancy Rader & Scott Hempling, The Renewables Portfolio Standard: a Practical Guide, Appendix A (2001).
[7] *See Merit Oil Co. v. Director of Div. of Necessaries of Life*, 65 N.E.2d 529, 532 (Mass. 1946) (citing *O'Gorman & Young, Inc. v. Hartford Fire Ins. Co.*, 282 U.S. 251, 257-258 (U.S. 1931)); see also *Commonwealth v. Leis*, 243 N.E.2d 898, 906-907 (Mass. 1969) (Kirk, J., concurring).
[8] *See Merit Oil Co.,* 65 N.E.2d at 532 (citing *Pacific States Box & Basket Co. v. White*, 296 U.S. 176, 185 (U.S. 1935)).

Therefore DOER finds that the concerns and assertions of legal infeasibility raised by various stakeholders do not dispose of the feasibility questions posed to DOER by the legislature.

Feasibility Determinations

Since Section 105 required DOER to assess the feasibility individually of subsection (c), the capacity requirement, and subsection (e), the netting provision, this report takes up the feasibility of each subsection in turn.

1. Capacity Commitment – Subsection (c)

Subsection (c) would require an external renewable energy generator to be a "committed capacity resource" for the "applicable annual period" in order to receive RECs for the renewable energy delivered into ISO-NE. Although these terms are not specifically defined in the statute, DOER interprets this language to require these generators to participate in the ISO-NE Forward Capacity Market (FCM).

The FCM enables ISO-NE to procure capacity about two years[9] in advance through a Forward Capacity Auction (FCA). The FCM ensures that ISO-NE has a pool of committed capacity resources that can be called upon when needed, such as during a critical peak load on a summer afternoon. The first auction was held in February 2008 for capacity to be available on June 1, 2010. In assessing the feasibility of a generating resource to commit its capacity into this market, it is critical to understand that there are several steps prior to the auction, which effectively extend the lead time for committing capacity into this market. A generator must first submit a Show of Interest (SOI), then a Qualification Package to ISO-NE to be eligible to bid at an FCA. These steps occur before each auction. A generator will then bid and, if successful, clear in an FCA for the procured amount of capacity to participate as a capacity resource. After the auction, ISO-NE has a set amount of committed capacity that it will be able to rely upon for resource

[9] Note that the process of participating in an FCA begins more than three years prior to the capacity commitment year, with the filing of a Statement of Interest and then a Qualification Package. The FCA for that commitment year is held two years in advance.

adequacy, and which it can access during critical times, especially during a shortage event.

Once a resource has cleared an auction and becomes a capacity resource for the ISO-NE region, it is subject to certain terms and conditions including the requirement that the resource bid into Day Ahead and Real Time energy markets. The rules governing the FCM have specific definitions for the types of resources that are eligible to participate:

- Generating resources are defined as resources that are not import capacity resources[10]

- Intermittent resources are defined as "wind, solar, run of the river hydro, and other renewable resources that do not have control over their net power output." ISO-NE retains authority to designate resources as intermittent through an individual determination of the control over power output.

- Import capacity resources are defined as those resources that originate outside the ISO-NE control area.

Intermittent resources are treated or referenced by ISO-NE as a subset or type of generating resource. Therefore, an intermittent resource, as defined by ISO-NE, cannot be an import resource. Import resources are generated outside of ISO-NE, regardless of the type of resource, meaning that ISO-NE does not create a subset of intermittent imports such as it does for internal resources. This distinction is significant in discussing intermittent resources, because the ISO-NE rules exempt intermittent resources within the control area from critical requirements of the FCM, such as the requirement to bid in the Day Ahead market.

[10] The definition also includes that it is not a "demand resource" but this is not relevant to this feasibility study.

In addition, ISO-NE also creates an "availability" score for each generator and if a generator's score falls below 40% over three years it will be barred from participating in the FCM. If the generator is not "available" when called upon, its score is reduced. This scoring system could work to disqualify intermittent resources over this period of time but internal intermittent resources are not subject to this penalty.

In carving out a separate definition and providing various exemptions, ISO-NE has identified, that intermittent resources, for capacity purposes, are different than other generating resources. This recognizes the potential risk inherent for intermittent resource participation in the FCM, and the distinctions stated in the rules offer incentives for these intermittent resources to participate in the FCM without this significant risk. But importantly, this more relaxed treatment applies only to internal intermittent resources, as no such distinction is created for intermittent import resources.

In addition, there are physical limitations on the ability to commit capacity based on availability at the transfer points, or tie lines, at each of the major interfaces between ISO-NE and adjacent control areas. Capacity and energy are separate resources. The limits imposed here on capacity are not only different than those for energy transfers but are far more restrictive. While there is an established amount of physical transfer capacity available for each tie line, an amount representing the tie benefit must be subtracted, leaving the remainder available. The tie benefit is the measure of the needed capacity in case of a shortage or other emergency situation, relied upon by ISO for planning purposes. This calculation can result in a situation in which an import generator clears in a capacity auction, but the amount of capacity for which it receives FCM payments is prorated down to as low as zero, as a result of the available space on the tie. For example, in the first FCA the Hydro-Quebec tie line had a transfer limit of 1400 MW but the tie benefit was also 1400. Even though 216 MW cleared the auction, no capacity resources were able to receive payment because there was no availability on the tie line.

In reviewing available data, DOER has determined that requiring external intermittent resources to commit capacity in the FCM would not only exacerbate the limits on the ties,

but would also negatively impact reliability, undermining the planning purposes of the FCM itself. If intermittent import resources were to reserve some or even most of the available space on the ties it would be at the expense of the more predictable reliable non-intermittent resources.

For these reasons, DOER has determined it is not feasible to require intermittent resources to commit capacity in the FCM. To ensure fairness and clarity, DOER proposes to define intermittent resources, for purposes of applying a capacity requirement, as those resources with a capacity factor of less than 50 percent. In general DOER has determined that these intermittent resources are primarily energy, not capacity resources, and there is no discernable reliability or system benefit to requiring them to commit their capacity. DOER has determined that a more productive alternative to a formal FCM capacity commitment from these types of resources would be to explore the possibility of procuring their energy through long term contracts. This alternative approach would achieve similar planning and reliability benefits as are normally associated with capacity commitments, without undermining reliability by inefficient use of the tie lines via capacity imports of intermittents.

In addition, DOER has determined it is feasible to implement a capacity commitment for non-intermittent resources defined for these purposes as those resources with a capacity factor of 50 percent or greater, subject to the timetable discussed below. DOER will include in its new RPS regulations a requirement that the eligible non-intermittent generator must clear in the next available FCA and that the renewable energy sold into ISO-NE during that capacity commitment shall be deemed eligible for RECs.

Given the current time table established for the FCM, it is not feasible for a generator to participate until the next available FCA open to new resources, which will be FCA4. The FCA4 capacity commitment period commences July 1, 2013, and has a deadline for submission of an SOI by no later than July 14, 2009. DOER recommends that non-intermittent generators wishing to participate in the Massachusetts RPS must also be a capacity resource through participation in the FCM. If a generator submits an SOI for

FCA4 then DOER will certify their RECs as RPS qualified, provided the generator has received a Statement of Qualification (SQ) as of July 14, 2009. Such a generator must participate in and clear the FCA4, even if the price drops to zero. That generator will then be eligible to receive RECs through the period for which it has committed capacity. A non-intermittent generator should not be penalized for any prorating or other interference with its ability to actually commit capacity that is beyond its control.

In sum, DOER has determined the best approach to achieve the intended purposes of subsection (c) is to:

- Require that any participant in the Massachusetts RPS program not commit capacity to another control area[11];
- Require non-intermittent resources commit their capacity, by submitting an SOI by July 14, 2009 for the FCA4 and subsequently clear that auction.
- Allow all generators that have submitted an SQ application prior to July 2, 2008 to maintain their eligibility under the current rules without taking further action.
- Apply these requirements to both internal and external generators seeking Massachusetts RECs.

2. Netting – Subsection (e)

Subsection (e) of Section 105 would require that DOER reduce, or net, the number of RECs by exports of energy from ISO-NE made by (1) a person seeking the REC for that import, (2) any affiliate of that person, or (3) any other person under contract with such person to export energy from ISO-NE and deliver that energy directly or indirectly to that person. The apparent purpose of this section is to prevent "greenwashing" or "roundtripping", which is the process of importing renewable energy into ISO-NE to create RECs and then exporting that energy or similar amount of energy out of ISO-NE. In effect, this practice amounts to gaming or bypassing the intended purpose of the RPS, and thereby eliminating the benefits associated with requiring that energy be imported into ISO-NE in order to earn a REC.

[11] This commitment should be limited to that percentage of the generator's production for which the generator is seeking MA RECs.

After an extensive review of various scenarios and examining the data available to identify such practices and to enforce restrictions against such practices, DOER concludes it is not technically feasible to implement this subsection for a number of reasons. After consulting with both ISO-NE and APX[12], DOER has determined it would not be possible to net transactions across affiliates and contracted parties, as would be required by subsection (e). The data that would be required to establish these relationships for netting purposes is simply not available.

Given the data available, it is only possible to track and net exports for the more limited set of transactions executed by the person seeking the REC. Neither the NERC eTag[13] nor the ISO-NE market and settlement system contain the data that would be required to reach beyond that person or entity. ISO-NE does not have the data to track contractual relationships, nor does it have the legal authority to ask participants about those relationships. Given that this subsection extends the netting requirement to include transactions of affiliates or contracted parties, implementation of the netting requirement only for the person seeking the RECs would defeat the subsection's intended purpose. A participant would only have to set up affiliate relationships to avoid any reduction in RECs, and DOER would be unable to police such actions.

While it is not feasible to implement subsection (e) as drafted, DOER proposes to adopt as part of its new regulations for the RPS a more limited version of the netting restriction, suggested by a number of stakeholders, and which DOER has concluded is feasible. This approach would be to require participants to self-attest that they will not engage in greenwashing themselves or through any affiliate or other contracted party. If DOER is in possession of information, or is provided objective information by another party, that suggests a reasonable possibility of greenwashing by a participant that self-attested, DOER will contact APX for further information. If after conferring with APX,

[12] APX is the corporation that administer the General Information System (GIS) to track data for ISO-NE.
[13] A NERC eTag is an electronically generated identification tool required by North American Electric Reliability Corporation (NERC) for transactions between control areas.

DOER concludes that evidence suggest that such greenwashing might have occurred over a material time period, DOER would initiate an investigation.

Conclusion

In reviewing the specific language presented in subsections (c) and (e) of Section 105 of the GCA, DOER has determined that these subsections are not feasible to implement as drafted. DOER has proposed recommendations in this report that it has determined capture the policy intent inherent in those subsections to the maximum extent feasible through alternative mechanisms. DOER recognizes the rationale in establishing a firmer relationship with generators beyond an individual sale of green power into ISO-NE for Massachusetts RECs. For this reason, DOER proposes that those resources wishing to avail themselves of the benefits associated with the Massachusetts REC market agree to not commit their capacity to any other control area. In addition, DOER has determined non-intermittent resources would assist ISO-NE in its reliability and planning of the demand needs of the grid and should be required to commit their capacity through the FCM in order to receive RECs. This serves the reliability need of the capacity market while promoting the continued and increased use of renewable energy. For intermittent resources, DOER has determined it is not feasible to require a capacity commitment based on existing ISO-NE rules, the reality that resources with a capacity factor of less than 50 percent provide little capacity benefit, and space on the ties is better served for those resources that can best meet those reliability needs.

Also, while the netting subsection is not feasible as drafted, DOER has determined its alternative proposal of requiring self-attestation will allow for the possibility of investigating any potential greenwashing behavior that may occur. This requirement will serve as an incentive to both discourage greenwashing, and to provide a necessary enforcement mechanism if DOER determines a specific instance took place.